

### PERIODIC LUBRICATION

Refer to **Table 1** for lubrication service intervals.

# **Engine Oil and Filter**

# Engine oil type

Honda recommends the use of Honda GN4 four-stroke oil or an equivalent 10W-40 engine oil

with an API service classification of SG or higher. The service classification is stamped or printed on the can or label on plastic bottles. Try to use the same brand of oil at each oil change. Do not use oils with graphite or molybdenum additives as these can cause clutch slippage and other clutch related problems. Refer to **Figure 7** for the correct oil weight recommended to use in anticipated ambient temperatures (not engine oil temperature).

# CAUTION

**Do not** use oils labeled **Energy Conserving** in the service designation circles on the oil container (**Figure 8**). Energy conserving oils contain additives which may damage motorcycle clutch components.

## Engine oil level check

Check the engine oil level with the dipstick cap mounted on the right side of the engine.

1. Park the ATV on level ground and set the parking brake.

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- 2. Start the engine and let it run approximately 2-3 minutes
- 3. Shut off the engine and let the oil drain into the crankcase for a few minutes.
- 4. Unscrew and remove the dipstick cap (**Figure 9**) and wipe the dipstick clean. Reinsert it into the threads in the hole; do not screw it in. Remove the dipstick and check the oil level.
- 5. The level is correct when it is between the two dipstick lines (**Figure 10**).
- 6. If necessary, remove the filler cap on the left side of the engine (**Figure 11**) and add the recommended type oil (**Table 5**) to correct the level.
- 7. Replace the dipstick O-ring if it is damaged.
- 8. Install the dipstick/oil fill cap (**Figure 9**) and tighten it securely.

## Engine oil and filter change

**Table 1** lists the recommended oil and filter change intervals. This assumes that the ATV operates in moderate climates. If it operates in dusty conditions, the oil will get dirty more quickly and will require more frequent oil changes.

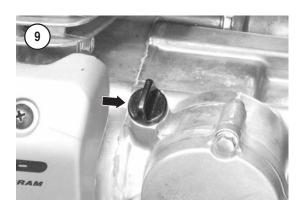
#### NOTE

Never dispose of engine oil in the trash, on the ground or down a storm drain. Many service stations and oil retailers will accept use oil and filters for recycling. Do not combine other fluids with engine oil to be recycled. To locate a recycler, contact the American Petroleum Institute (API) at www.recycleoil.org.

## NOTE

Running the engine heats the oil, which enables the oil to flow more freely and carry contaminates and sludge out with it when drained.

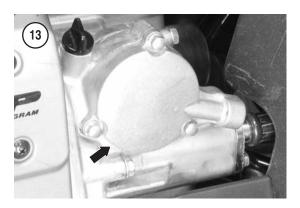
- 1. Park the ATV on level ground and apply the parking brake.
- 2. Start the engine and let it warm to normal operating temperature. Then shut the engine off.
- 3. Place a clean drain pan underneath the engine.
- 4. Remove the drain plug (**Figure 12**) located in the bottom of the engine and allow the oil to drain.
- 5. Remove the dipstick cap (**Figure 9**) to help speed up the flow of oil.
- 6. Allow the oil to drain completely.

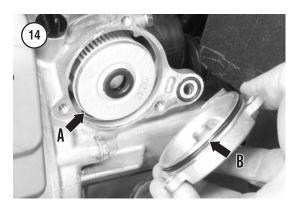


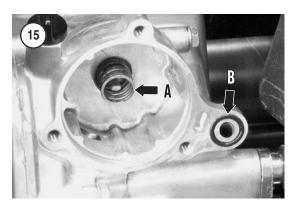


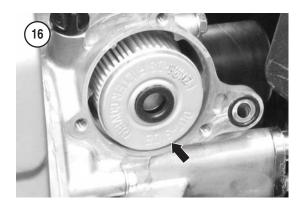












- 7. To replace the oil filter, perform the following:
  - a. Remove the engine oil filter cover mounting bolts and cover (**Figure 13**).
  - b. Remove and discard the oil filter (A, Figure 14).
  - c. Remove the O-ring (B, **Figure 14**) from the oil filter cover groove.
  - d. Remove the spring (A, **Figure 15**) from the engine.
  - e. Remove the O-ring (B, **Figure 15**) from the engine.
  - f. Clean the spring and the filter cover in solvent and dry them thoroughly.
  - g. Replace any cracked or damaged O-rings.
  - h. Lubricate each O-ring with engine oil.
  - i. Install the O-ring into the engine groove (B, Figure 15).
  - j. Install the O-ring into the filter cover groove (B, **Figure 14**).
  - k. Install the spring (A, Figure 15).

#### **CAUTION**

Installing the oil filter backwards will restrict oil flow and cause engine damage.

- Install the new oil filter with the outside mark (Figure 16) facing out.
- m. Install the engine oil filter cover (**Figure 13**) and tighten the mounting bolts to 10 N•m (88 in.-lb.).
- 8. Replace the drain plug gasket if it is damaged or if it was leaking. Install the drain plug (**Figure 12**) and gasket and tighten to 18 N•m (13 ft.-lb.).
- 9. Insert a funnel into the oil fill hole and fill the engine with the correct weight and quantity oil; see *Engine Oil Type* in this section. Refer to **Table 6** for engine oil capacity.

## **CAUTION**

Honda lists three different engine oil capacities (**Table 6**), each specified for the type of service being performed. Be sure to install the correct oil capacity.

- 10. Screw in the dipstick cap (Figure 9) securely.
- 11. Start the engine and run it at idle speed.
- 12. Turn the engine off and check the drain bolt and oil filter cover for leaks.
- 13. Check the oil level and adjust it if necessary.

#### WARNING

Prolonged contact with used oil may cause skin cancer. Wash your hands

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with soap and water after handling or coming in contact with motor oil.

## Oil screen

Two oil screens (**Figure 17**) are located inside the engine. Because the engine must be disassembled to service the oil screens, servicing them is not part of the engine periodic maintenance schedule. However, service the oil screens when troubleshooting a lubrication system problem or when internal engine damage occurs.

### **Front Differential Gearcase**

### Recommended gearcase oil

Honda recommends Honda shaft drive oil or an equivalent SAE 80 hypoid gear oil (**Table 5**).

### Oil level check

- 1. Park the ATV on a level surface and set the parking brake.
- 2. Wipe the area around the oil fill cap clean and unscrew the oil fill plug (**Figure 18**).
- 3. The oil level should be level with the bottom thread of the fill plug hole. If the oil level is low, add hypoid gear oil (**Table 5**) until the level is correct.
- 4. Inspect the oil fill plug O-ring and replace it if it is damaged.
- 5. Install the oil fill cap and tighten it to 12 N•m (106 in.-lb.).

### Oil change

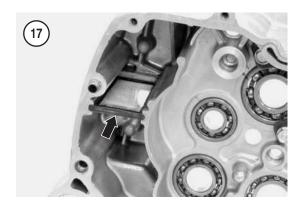
The recommended oil change interval is listed in Table 1

Discard old oil as described in *Engine Oil and Filter Change* in this chapter.

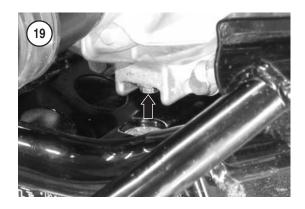
## NOTE

A short ride heats the front differential gearcase oil, which enables the oil to flow more freely and carry more contaminates and sludge when drained.

1. Ride the ATV until normal operating temperature is reached, then park the ATV on a level surface and set the parking brake. Turn the engine off.







NOTE Skid plate removal is not necessary for access to drain plug.

- 2. Place a drain pan underneath the drain plug (**Figure 19**).
- 3. Remove the oil fill plug (Figure 18).
- 4. Remove the drain plug (**Figure 19**) and allow the oil to drain.
- 5. Replace the drain plug gasket if it is leaking or damaged.







- 6. Install the drain plug and gasket, and tighten to 12 N•m (106 in.-lb.).
- 7. Insert a funnel into the oil fill plug hole and pour in the recommended type (**Table 5**) and quantity (**Table 7**) of gear oil.
- 8. Remove the funnel and check the oil level. It should come up to the bottom thread of the fill plug hole. Add additional oil if necessary.
- 9. Inspect the oil fill plug O-ring and replace it if it is damaged.
- 10. Install the oil fill plug (**Figure 18**) and tighten to  $12 \text{ N} \cdot \text{m}$  (106 in.-lb.).

11. Test ride the ATV and check for leaks. After the test ride, recheck the oil level and adjust it if necessary.

#### **Rear Differential Gearcase**

## Recommended gearcase oil

Honda recommends Honda shaft drive oil or an equivalent SAE 80 hypoid gear oil (**Table 5**).

#### Oil level check

- 1. Park the ATV on a level surface and set the parking brake.
- 2. Wipe the area around the oil check plug (**Figure 20**) and remove it. Oil should immediately start to flow out of the check hole. If oil flows out of the hole, the oil level is correct. Reinstall the oil check plug and tighten it to 12 N•m (106 in.-lb.). If oil did not flow out of the hole, continue with Step 3.
- 3. Remove the oil fill cap (**Figure 21**) and slowly add hypoid gear oil (**Table 5**) until oil starts to flow out of the check hole. Reinstall the oil check plug and tighten it to 12 N•m (106 ft.-lb.).
- 4. Install the oil fill cap (**Figure 21**) and tighten it to 12 N•m (106 in.-lb.).

## Oil change

The recommended oil change interval is listed in **Table 1**.

Discard old oil as described in the *Engine Oil and Filter Change* in this chapter.

### NOTE

A short ride heats the rear gearcase oil, which enables the oil to flow more freely and carry more contaminates and sludge out when drained.

- 1. Ride the ATV until it reaches normal operating temperature, then park the ATV on a level surface and set the parking brake. Turn the engine off.
- 2. Place a drain pan underneath the drain plug (**Figure 22**). Unscrew the drain plug and remove it. Allow the oil to drain out.
- 3. Wipe the area around the oil fill cap clean and unscrew the oil fill cap (**Figure 21**).
- 4. Inspect the drain plug washer and replace it if it is leaking or damaged.

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- 5. When the oil stops draining, install the drain plug and gasket and tighten to 12 N•m (106 in.-lb.).
- 6. Insert a funnel into the oil fill cap hole and add the recommended type (**Table 5**) and quantity (**Table 7**) gear oil.
- 7. Inspect the oil fill cap O-ring and replace it if it is damaged.
- 8. Install the oil fill cap (**Figure 21**) and tighten it to 12 N•m (106 in.-lb.).
- 9. Test ride the ATV and check for leaks.

#### **Control Cables**

Clean and lubricate the throttle, brake, choke and reverse cables at the intervals indicated in **Table 1**. Also, check the cables for kinks, excessive wear, damage or fraying that could cause the cables to fail or stick.

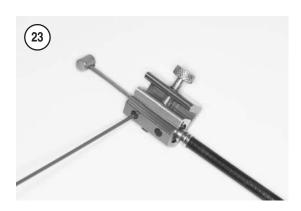
The best method of control cable lubrication involves the use of a cable lubricator and a can of cable lube or a general lubricant. Do not use chain lube as a cable lubricant.

- 1. Disconnect the cable to be lubricated. Note the following:
  - a. To service the throttle cable, refer to *Throttle Housing and Cable* in Chapter Eight.
  - b. To service the brake cables, refer to Rear Brake Pedal and Cable and Rear Brake Lever/Parking Brake Cable in Chapter Thirteen.
  - c. To service the choke cable, refer to *Choke Cable Replacement* in Chapter Eight.
  - d. To service the reverse cable, refer to *Reverse*Selector Cable Replacement in Chapter
    Seven.
- 2. Attach a cable lubricator to the end of the cable following its manufacturer's instructions (**Figure 23**).
- 3. Inject cable lubricant into the cable until it begins to flow out of the other end of the cable.

## NOTE

Place a shop cloth at the end of the cable to catch the oil as it runs out.

- 4. Disconnect the lubricator.
- 5. Apply a light coat of grease to the cable ends before reconnecting them. Reconnect the cable and adjust it as described in this chapter.
- 6. Reverse Step 1 to reconnect the cables.



- 7. After lubricating the throttle cable, operate the throttle lever at the handlebar. It should open and close smoothly with no binding.
- 8. After lubricating the brake cable(s), check brake operation.

#### UNSCHEDULED LUBRICATION

The services listed in this section are not included in **Table 1** (maintenance and lubrication schedule). However, lubricate these items throughout the service year. The service intervals depend on ATV use. Use a water-resistant bearing grease when grease is specified in the following sections.

# **Steering Shaft**

Remove the steering shaft (Chapter Ten) and lubricate the bushing with grease. At the same time, check the lower bearing and seals for damage.

## Front Upper and Lower Control Arms

Remove the upper and lower control arm pivot bolts and lubricate the bolts and bushings with grease. Refer to Chapter Ten for service.

# Front Wheel Bearing Seals

Lubricate the front wheel bearing seals with grease. If the front wheel bearings are not sealed, lubricate them as well. Refer to Chapter Ten for service.

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